

EIE4432 Final Project Report

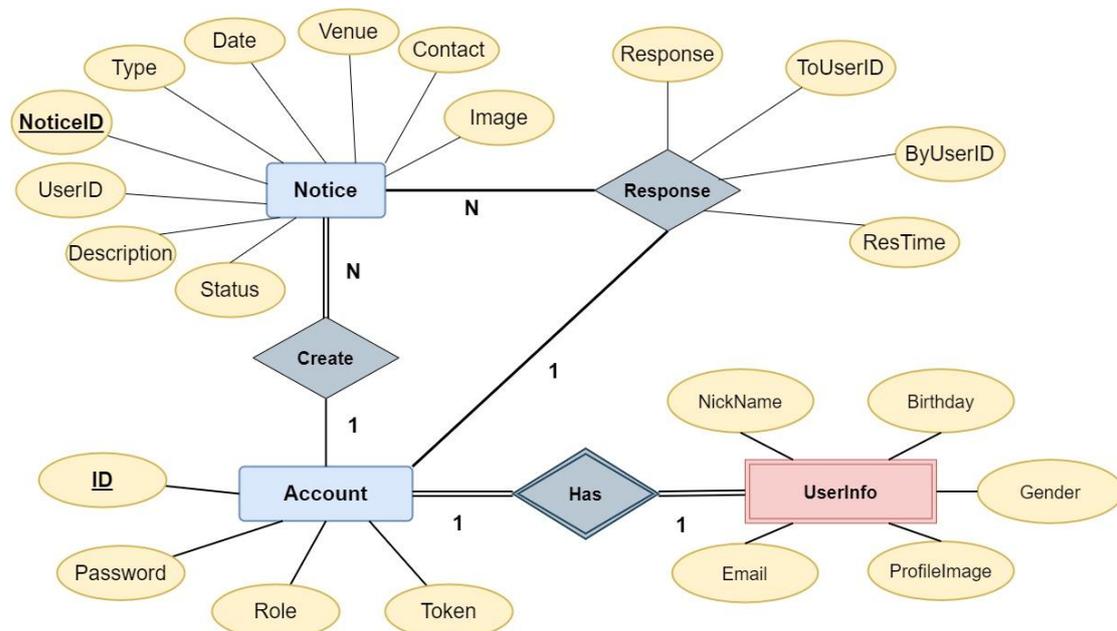
HAO Jiadong 20084595d

I. Overview

In this project, I built a website named “PolyU Lost and Found” using HTML, CSS, JavaScript, PHP, Bootstrap, and MySQL. The website not only helps users create, view, and respond to notices, but also helps administrators view user information, notice information, and system statistics.

II. Database Design

1. ER Diagram



2. Descriptions of tables and data fields

2.1 Account: Store all information of an account (for both user and admin).

Column Name	Description
ID (PK)	Uniquely identify an account, used when logging in.
Password	Store the user password.
Role	Only two possible values: 0 or 1. 0 indicates the account is a user account. 1 indicates the account is an admin account.
Token	Used to store a 4-digit validation code when resetting the password.

2.2 UserInfo: Store the personal information of all registered users.

Column Name	Description
User ID(PK)(FK)	A foreign key that references the primary key “ID” of table “Account”, which can uniquely identify a user.
NickName	Store the nickname of a user.
Email	Store the email of a user.
ProfileImage	Store the path of the profile image. All profile images will be stored in a folder called “UploadImg”. The relative path is used, hence, the file path is in the format of “./UploadImg/filename(<i>generated by a random function during uploading</i>)”.
Gender	Only two possible values: 0 or 1. 0 indicates the user is a male. 1 indicates the user is a female.
Birthday	A data field of type Date to store the birthday of a user.

2.3 Notice: Store information of all notices.

Column Name	Description
NoticeID(PK)	A String of length thirteen automatically generated when a notice is created, which can uniquely identify a notice.
UserID(FK)	A foreign key that references the primary key “UserID” of table “UserInfo”, used to specify who creates this notice.
Type	Only two possible values: 0 or 1. 0 indicates the notice is type Lost . 1 indicates the notice is type Found .
Date	A data field of type Timestamp to store the date the notice is created.
Venue	Store the lost/found venue.
Contact	Store the contacts of the user.
Description	Store a paragraph to describe the notice.
Image	Store the path of the item image. All item images will be stored in a folder called “UploadItemImage”. The relative path is used, hence, the file path is in the format of “./UploadItemImage/filename(<i>generated by a random function during uploading</i>)”.
Status	Only two possible values: 0 or 1. 0 indicates the notice is not completed (not responded). 1 indicates the notice is completed.

2.4 Response: Store information of all responses.

Column Name	Description
NoticeID(PK)(FK)	A foreign key that references the primary key “NoticeID” of table “Notice”, which can uniquely identify a notice.
Response	Store the content of a response.
ToUserID(FK)	A foreign key that references the primary key “UserID” of table “UserInfo”, which can uniquely identify which user is responded to.
ByUserID(FK)	A foreign key that references the primary key “UserID” of table “UserInfo”, which can uniquely identify which user creates this response.
ResTime	A data field of type Timestamp to store the date the notice is responded.

III. Function Specification

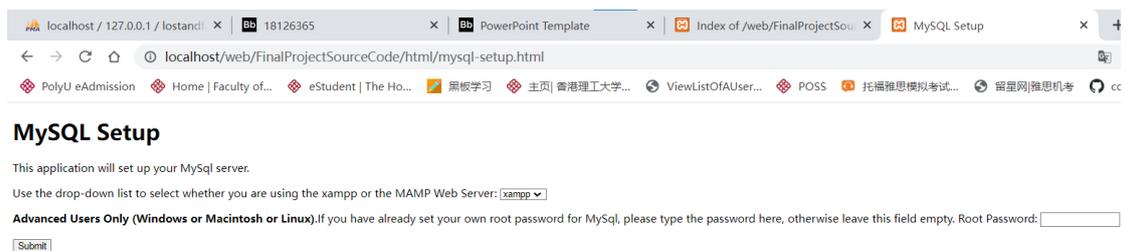
Category	Functions	Finished Or Not
User Registration	User registration with user id, nickname, email, profile image, gender, and birthday.	Yes
	Update personal information including nickname, email and profile image.	Yes
	Admin doesn't need to register.	Yes
User Login	Two roles: admin and users	Yes
	Users use id and password to log in. The admin uses default id “admin” and password “adminpass” to login in.	Yes
	Remember login status using cookie.	Yes
	User logout (delete cookie).	Yes
	Forget and reset password (for users). (Validation code is sent by email)	Yes
User Operations	Create Notice: A user creates a notice with the following information: type(lost/found), date,venue,contact,description, and image.	Yes
	View Notices: A list page of all pending notices in the system. Each notice has “respond” and “view” buttons.	Yes
	View My Notices: A list page of all notices that are created or responded by the user.	Yes
	View Notice Detail: A detailed page of a notice (including	Yes

	response if it is completed)	
	Respond to A Notice: A user responds to a notice by sending a message in the textbox to the owner of the notice. The notice will be marked as completed.	Yes
Admin Operations	View List of Registered Users: A list page of all registered users in the ascending order of users' nicknames, showing the number of notices each user created and responded respectively.	Yes
	View List of Pending/Completed Notices: Two list pages of all pending or completed notices in the system.	Yes
	View List of Notices of a User: A list page of all pending or completed notices in the system created by a user, specified by the user id. (Search through the search bar)	Yes
	*(Optional) System Statistics: Use a chart to show the statistics of the number of notices in different age ranges (e.g., [10,30], [30,50], [50, 70], etc.) among users.	Yes

IV. Demonstration of all functions

1. Initialization of the database:

Before testing the website, you have to create tables and insert some initial records. You can go to `/FinalProjectSourceCode/html/mysql-setup.html` under your server folder and you will see the following webpage.



Click the submit button and you will see the following message, which reminds you that you have successfully created the tables and initial records.

The screenshot shows a web browser window with the address bar at localhost/web/FinalProjectSourceCode/php/CreateTable.php. The page content includes:

MySQL Setup: SUCCESS!

Created MySQL user **wbip** with password **wbip123**, with all privileges on the **lostandfound** database.

Created tables **User** and **Notice** in the **lostandfound** database.

The initial records are shown for reference:

Account:

ID	Password	Role	Token
1	1	0	NULL
2	2	0	NULL
3	3	0	NULL
4	4	0	NULL
5	5	0	NULL
6	6	0	NULL
123	123	0	NULL
admin	adminpass	1	NULL

Notice:

NoticeID	UserID	Type	Date	Venue	Contact	Description	Image	Status
N1	1	0	2019-01-18 00:00:00	VA Canteen	67759521	I left my brown wallet on the canteen desk at arro...	../UploadItemImg/1.jpg	0
N2	2	1	2020-02-18 00:00:00	Core A	18520228726	I found a black wallet at Core A at around 3 p.m.	../UploadItemImg/2.jpg	0
N3	3	0	2020-02-20 00:00:00	PAO Yue-kong Library	12310228726	I left my black umbrella on the fifth floor of the...	../UploadItemImg/3.jpg	0
N4	4	1	2020-02-21 00:00:00	PAO Yue-kong Library	58762302	I found a pair of glasses on a desk on the first f...	../UploadItemImg/4.jpg	0
N5	5	0	2020-09-18 00:00:00	Block M	123452231	I left my necklace on the thrid floor of Block M.	../UploadItemImg/5.jpg	0
N6	6	1	2021-04-18 00:00:00	VA Canteen	77089985	Whose green bottle? I found it when I was eating a...	../UploadItemImg/6.jpg	0
N7	1	0	2021-02-14 00:00:00	CD512	67759521	I forgot to take my earphone with me after the cla...	../UploadItemImg/7.jpg	0
N8	2	1	2022-01-01 00:00:00	DE604	18520228726	I found a cup in DE604 at arround 6 p.m.	../UploadItemImg/8.jpg	0
N9	3	0	2022-01-05 00:00:00	Li Ka Shing Tower	12310228726	Is anyone see my watch? I lost it in the Li Ka Shi...	../UploadItemImg/9.jpg	0
N10	4	1	2022-01-18 00:00:00	FJ304	58762302	I found a blue bag in FJ304.	../UploadItemImg/10.jpg	0
N11	5	0	2022-01-19 00:00:00	FJ301	123452231	I forgot to take my bottle after the lecture.	../UploadItemImg/11.jpg	0
N12	6	1	2022-05-16 00:00:00	PAO Yue-kong Library	77089985	I found a lipstick on the table.	../UploadItemImg/12.jpg	0
N13	123	0	2022-06-12 00:00:00	Z302	23145213	I lost a book named Milk And Honey.	../UploadItemImg/13.jpg	0
N14	123	1	2022-08-21 00:00:00	VA Canteen	23145213	I found a pair of pink glasses at arround 1 p.m. w...	../UploadItemImg/14.jpg	0

Response (no initial records):

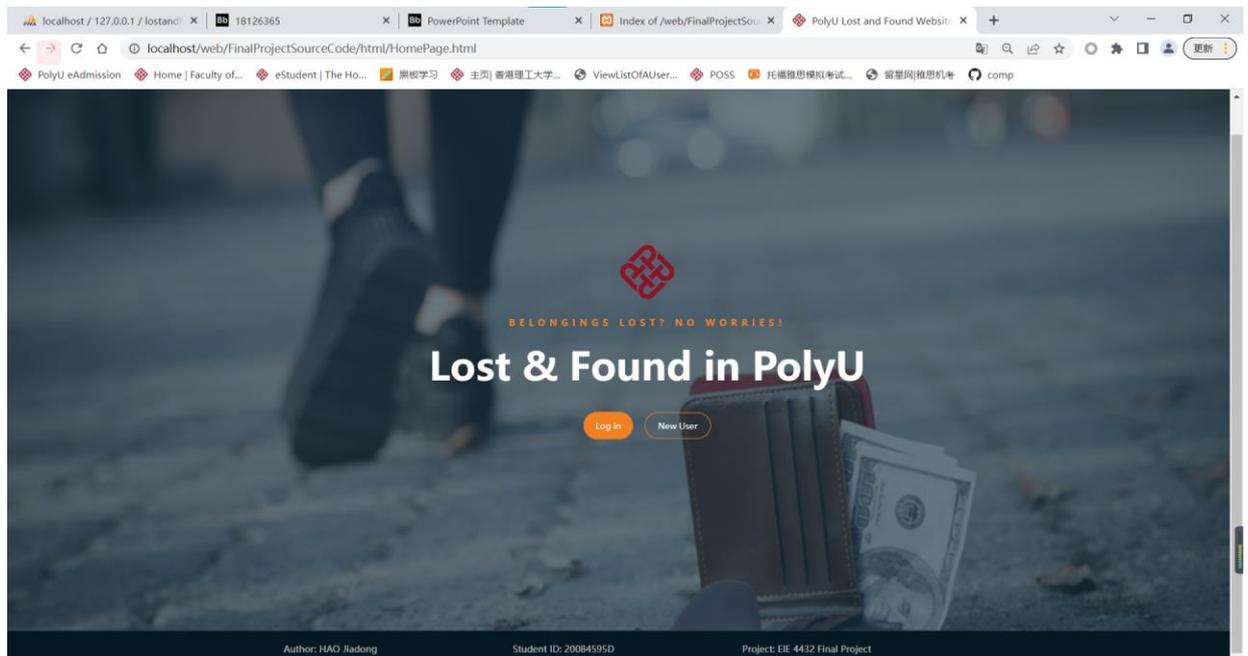
NoticeID	Response	ToUserID	ByUserID	ResTime
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User Info:

UserID	NickName	Email	ProfileImage	Gender	Birthday
1	Jack	571532474@qq.com	../UploadImg/1.jpg	0	1953-02-09
2	Mike	78912345@qq.com	../UploadImg/2.jpg	0	1962-01-19
3	Joe	5201314@qq.com	../UploadImg/3.jpg	1	1990-12-29
4	Julie	770625@qq.com	../UploadImg/4.jpg	1	1987-07-16
5	Burton	1149423@qq.com	../UploadImg/5.jpg	0	2012-04-09
6	Mary	87909213@qq.com	../UploadImg/6.jpg	1	2000-01-07
123	Jay Chou	20084595d@connect.polyu.hk	../UploadImg/Jay.jpg	0	2002-04-07

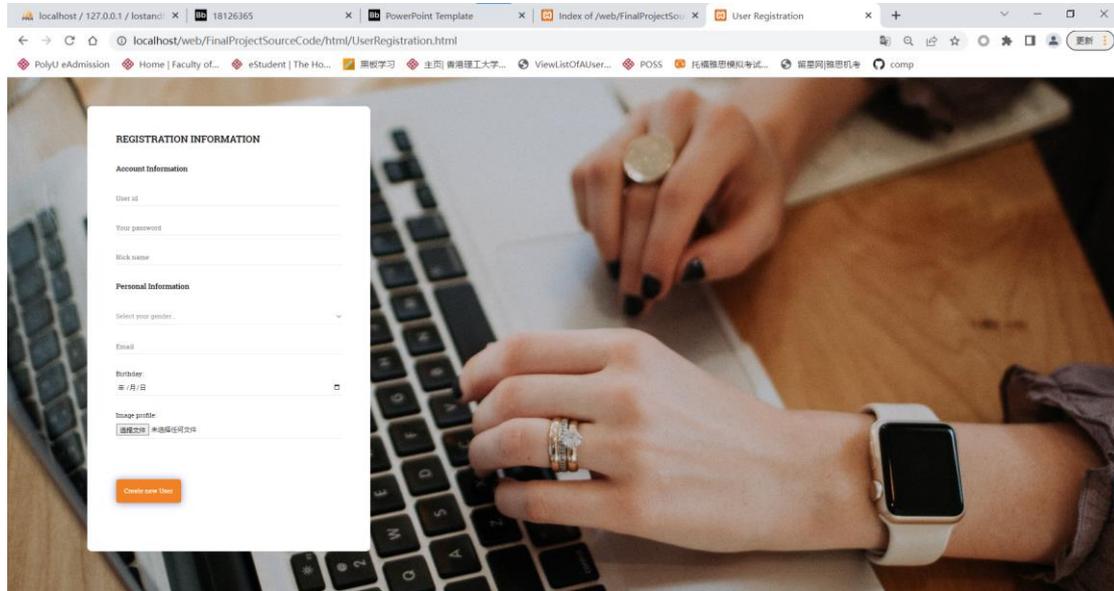
2. Main Page

You can go to `/FinalProjectSourceCode/html/HomePage.html` under your server folder and you will see the following webpage.



3. User Registration

After clicking the “New User” button on the home page, you will see the following page for user registration.



Each field is required. If you leave a field blank and click the “Create New User” button, you will receive some prompts.

REGISTRATION INFORMATION	
Account Information	
User id	571532474
Your password	Your password
Nick name	Nick name
Personal Information	
Select your gender:	Male
Email	Email
Birthday:	Birthday:
Image profile:	Image profile:

The image shows a user registration form with several error messages in yellow boxes:

- Next to the 'User id' field: "Your user ID is required!"
- Next to the 'Your password' field: "Your password is required!"
- Next to the 'Nick name' field: "Your nick name is required!"
- Next to the 'Email' field: "Please provide a valid email!"
- Next to the 'Birthday' field: "Please provide a valid email!"
- Next to the 'Image profile' field: "Please choose your birthday!"

Birthday:

2002/04/07



Image profile:

未选择任何文件

 Please upload a profile image!

After inputting all fields, click the “Create New User” button to create a user account.

Account Information

571532474

.....

JJ Lin

Personal Information

Male



571532474@qq.com

Birthday:

2002/04/07



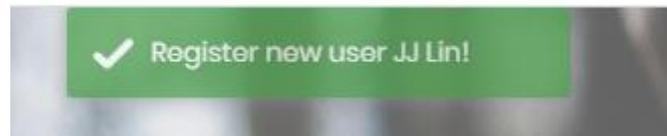
Image profile:

JJLIN.jpg

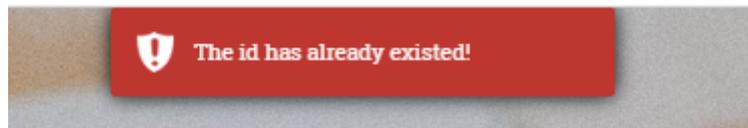


Create new User

You will see the following prompt and you will jump to the login interface.

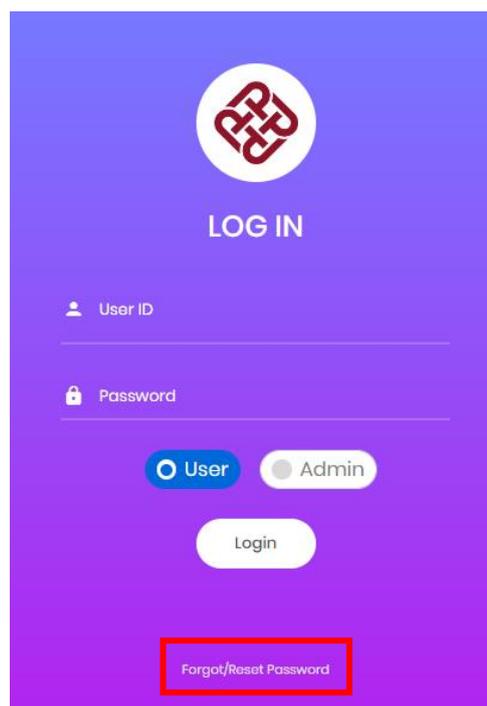


Note that if an account has already existed in the database, you are not allowed to create the account. You will see the following prompt and jump back to the registration page.

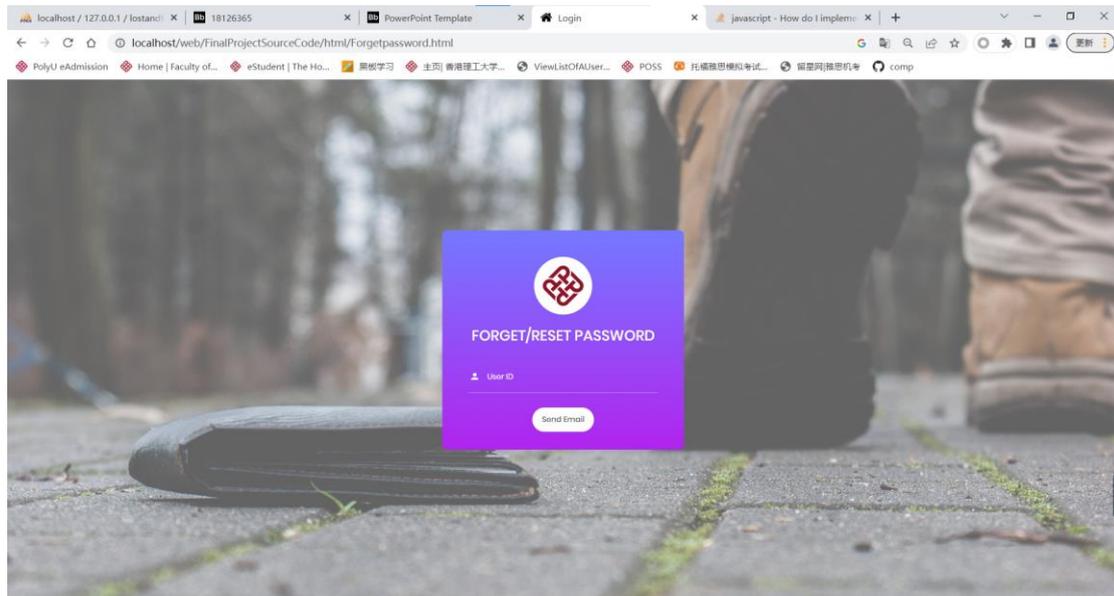


4. Forget/Reset Password

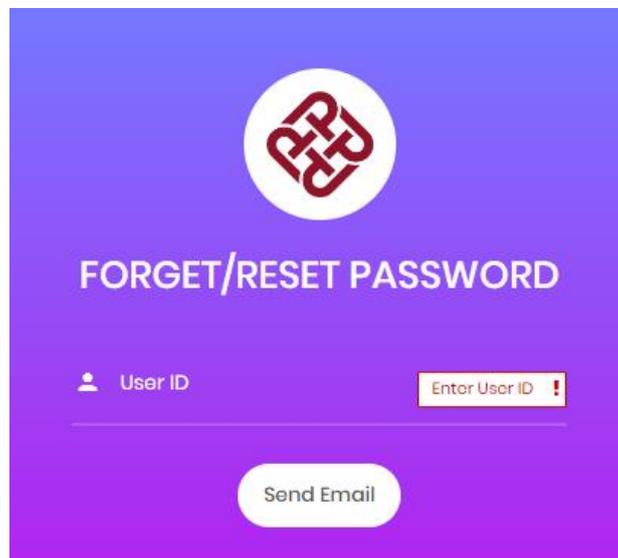
Click the “Forgot/Reset Password” tag at the bottom of the login box to reset your password.



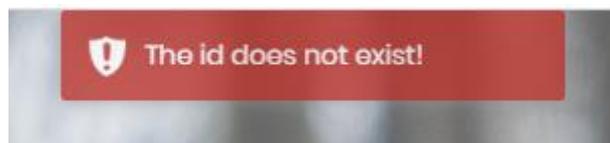
You will see the following window asking you to input the user id of which you want to reset the password.



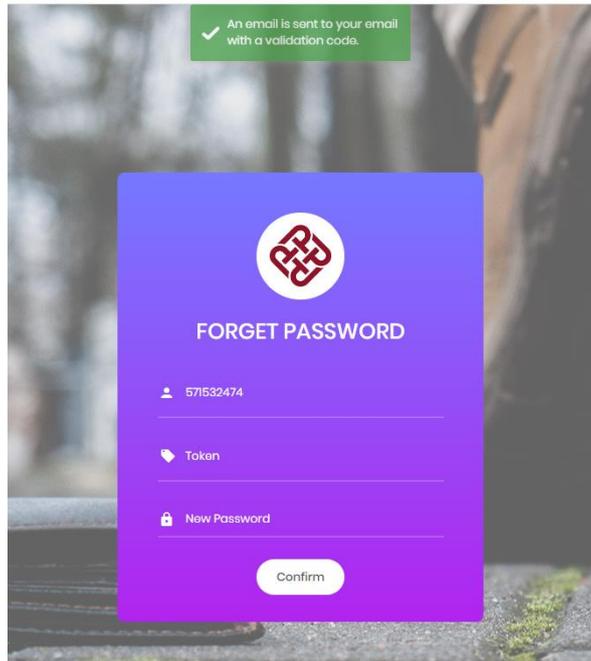
If leaving the input field blank and directly clicking the “Send Email” button, an alert message will show up.



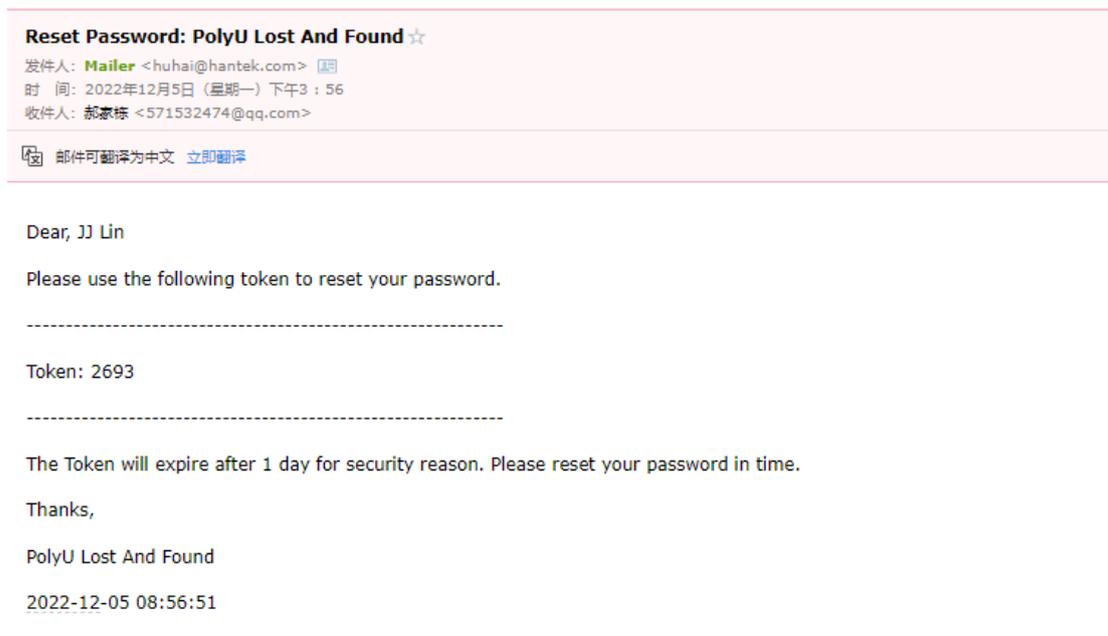
If inputting a wrong id, a pop-up window will show up to alert.



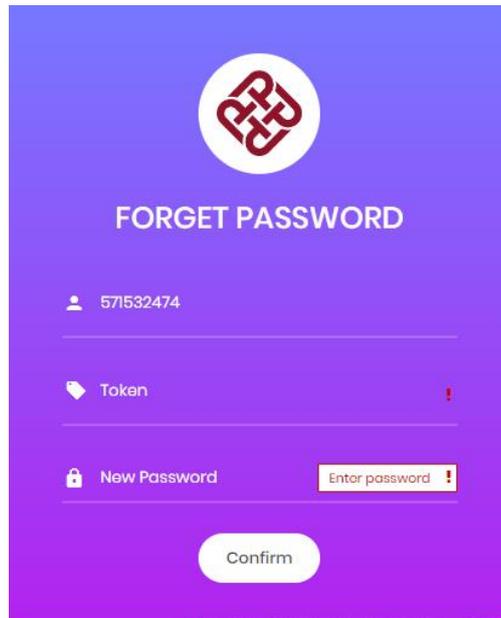
If inputting a valid id and clicking the “Send Email” button, you will see the following box.



Wait for a few seconds and check your registered email. You will see the following reset password email with a randomly generated four-digit token. (If you don't get the mail, you can check your bin).

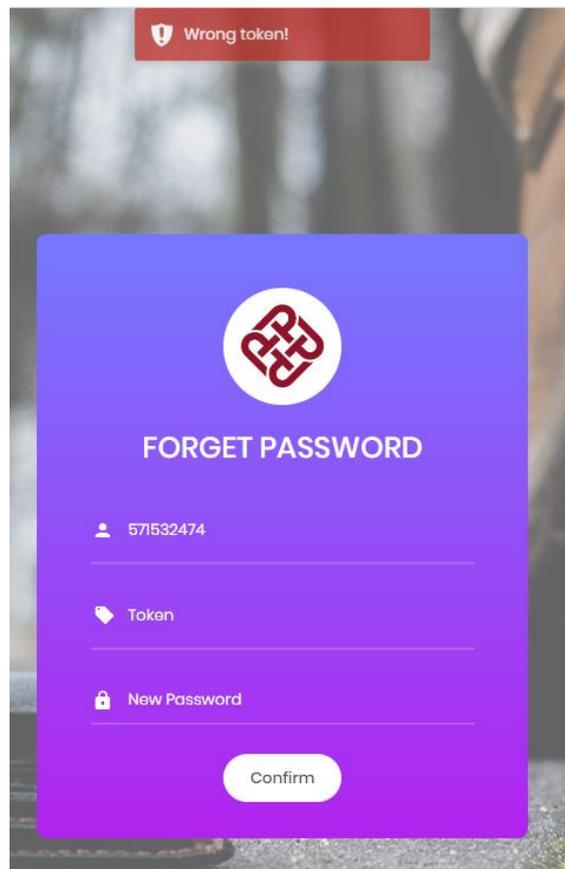


If you forget to input the token or the new password and click the “Confirm” button, some error messages will show up as followings.



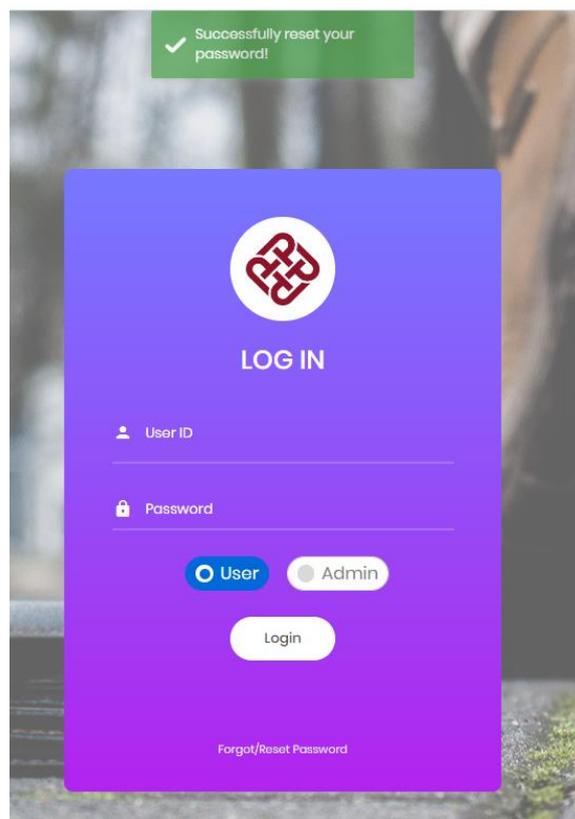
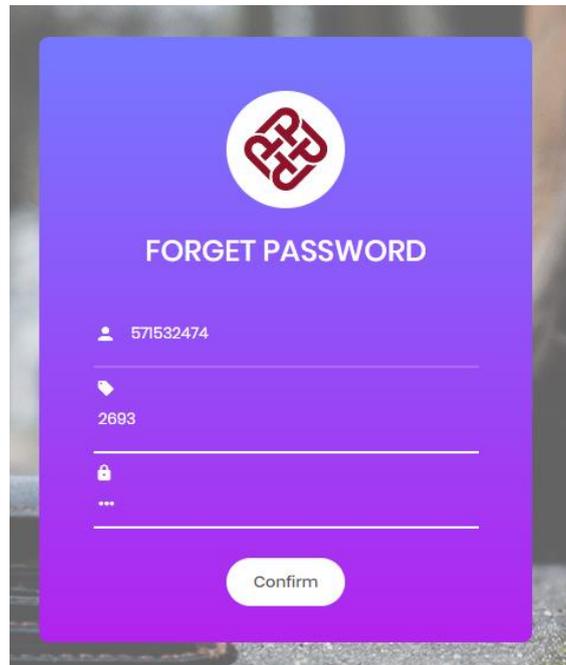
The image shows a mobile application screen for a 'FORGET PASSWORD' form. At the top, there is a circular logo with a red and white geometric pattern. Below the logo, the text 'FORGET PASSWORD' is displayed in white. The form contains three input fields: a user ID field with the value '571532474', a 'Token' field with a red exclamation mark error indicator, and a 'New Password' field with a placeholder 'Enter password' and a red exclamation mark error indicator. A 'Confirm' button is located at the bottom of the form.

If you input the wrong token, you will not be allowed to confirm.



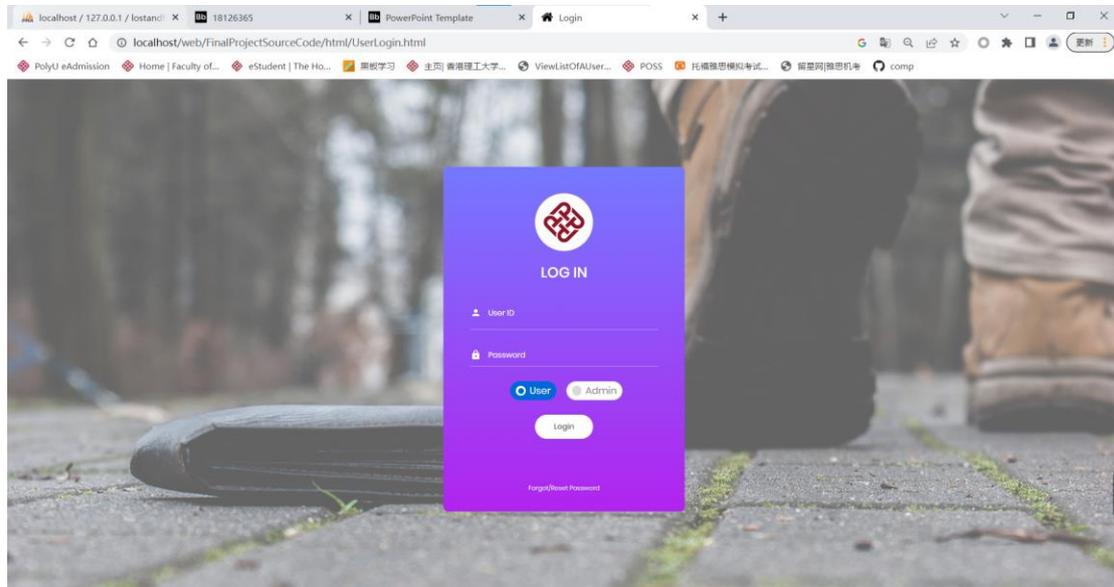
The image shows the same 'FORGET PASSWORD' form as in the previous screenshot, but with a red error message 'Wrong token!' displayed at the top. The form fields and the 'Confirm' button are visible below the error message.

If you input the token correctly, you can successfully reset your password and jump back to the login page.

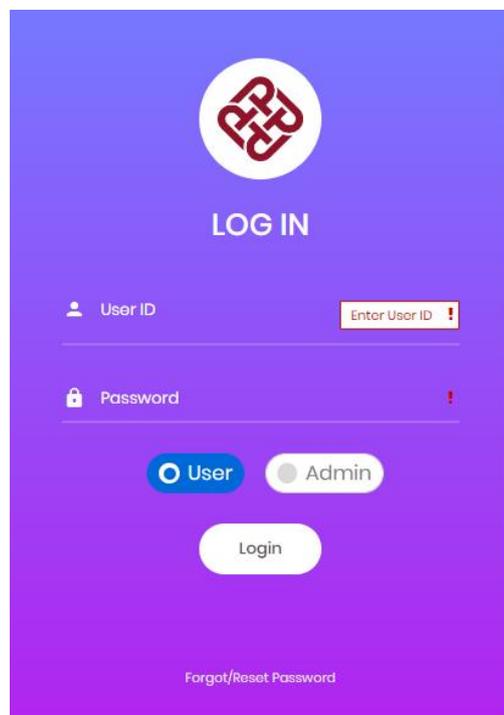


5. User Login/Log out

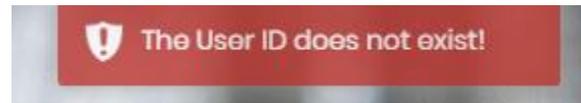
The following is the login page. You can visit it directly through the “Log in” button on the Home Page. When you successfully create a new account or reset your password, you will also jump to this page.



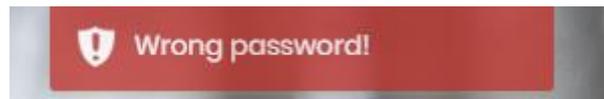
The User ID and password are required. If a user leaves any field blank and clicks the “Login” button, some prompts will show up as followings.



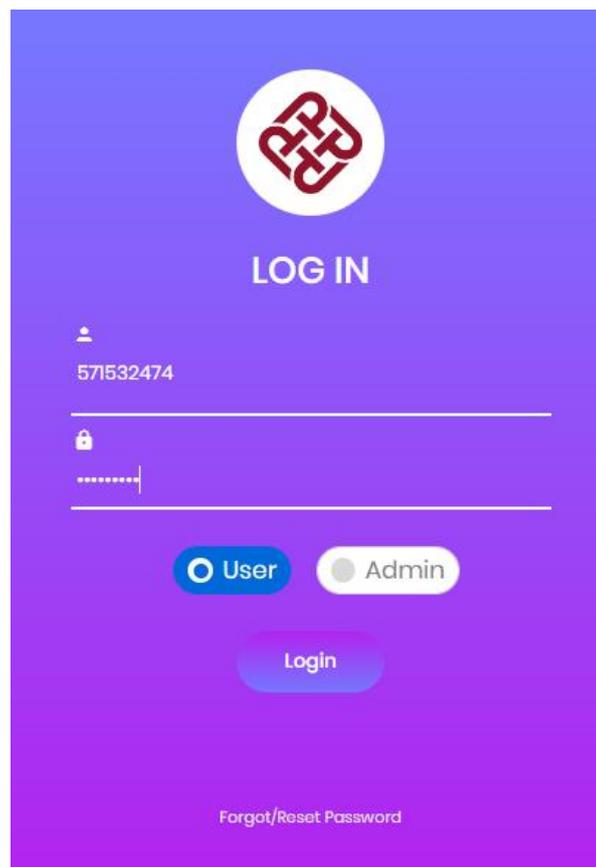
If the user inputs a user ID which is not registered, the following pop-up window will show up.



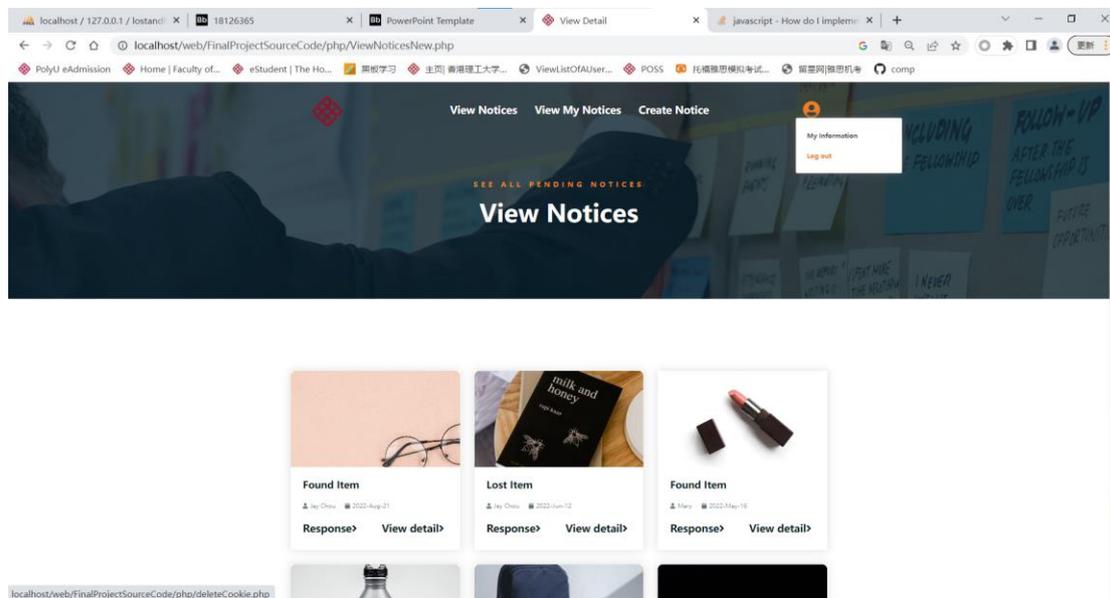
If the user input an existing user ID but the password doesn't match the ID, the following pop-up window will show up.



After inputting a valid user id and password and selecting the "User" option to log in as a user, you can click the "Login" button to log in.



If you see the following user interface, you successfully log in to the system. Once you log in, your UserID will be stored by the cookie. If you want to log out, just hover on the user icon at the top-right corner and click the “Log out” tag. Then you will jump to the main page and your cookie is deleted.

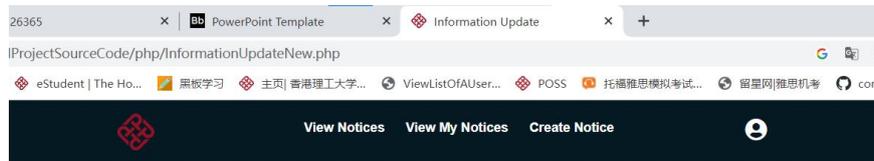


6. Update personal information

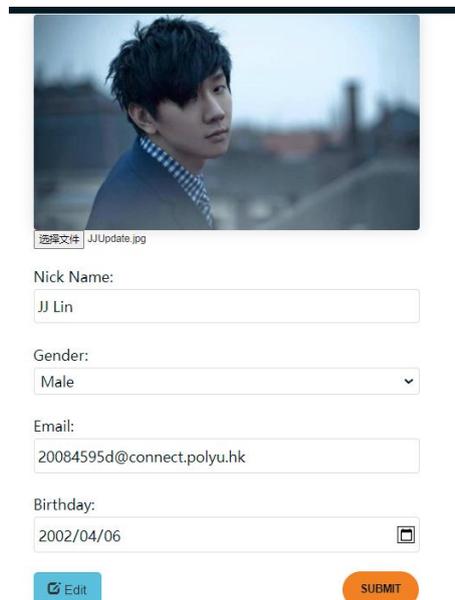
After logging in, you can hover on the user icon at the top-right corner and click the “My Information” tag to view and update your personal information.



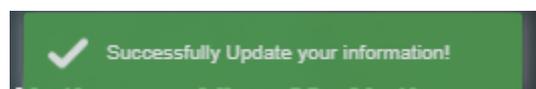
Initially, all the input fields including the “SUBMIT” button are disabled, which means that you can only view your information.



After clicking the “Edit” button, you can modify your personal information.



After clicking the “SUBMIT” button, you will see the following prompt.



One thing to add, validation will also be conducted during the update, which prevents the user from clearing any field and submitting.

Nick Name:

Gender: ! Your nick name is required!

Email:

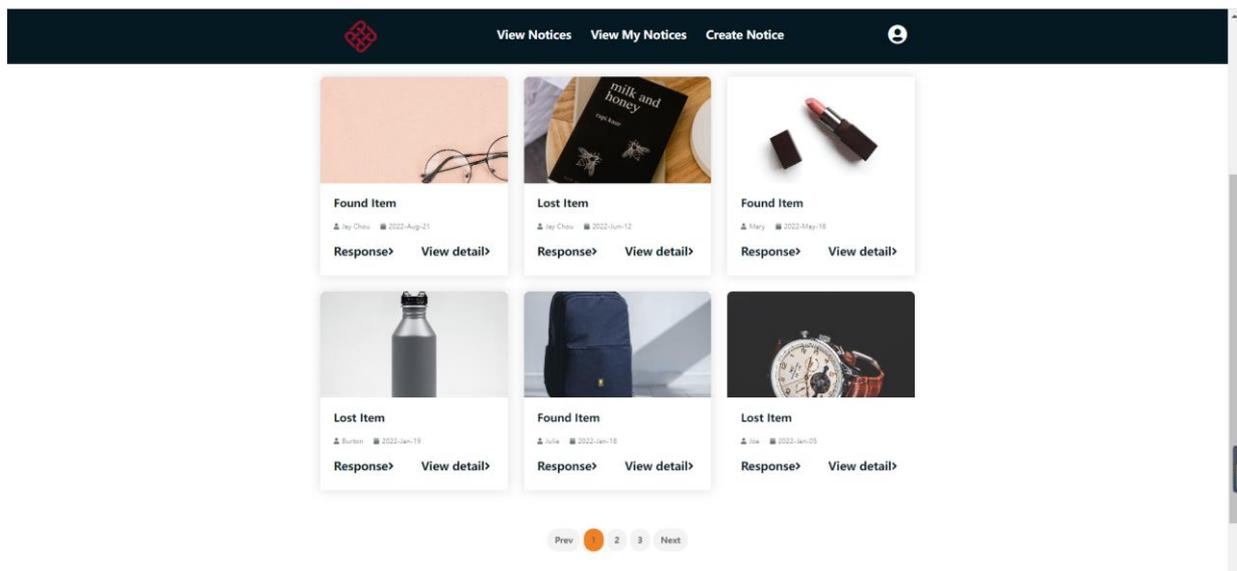
Birthday: ! Your email is required!

Birthday:

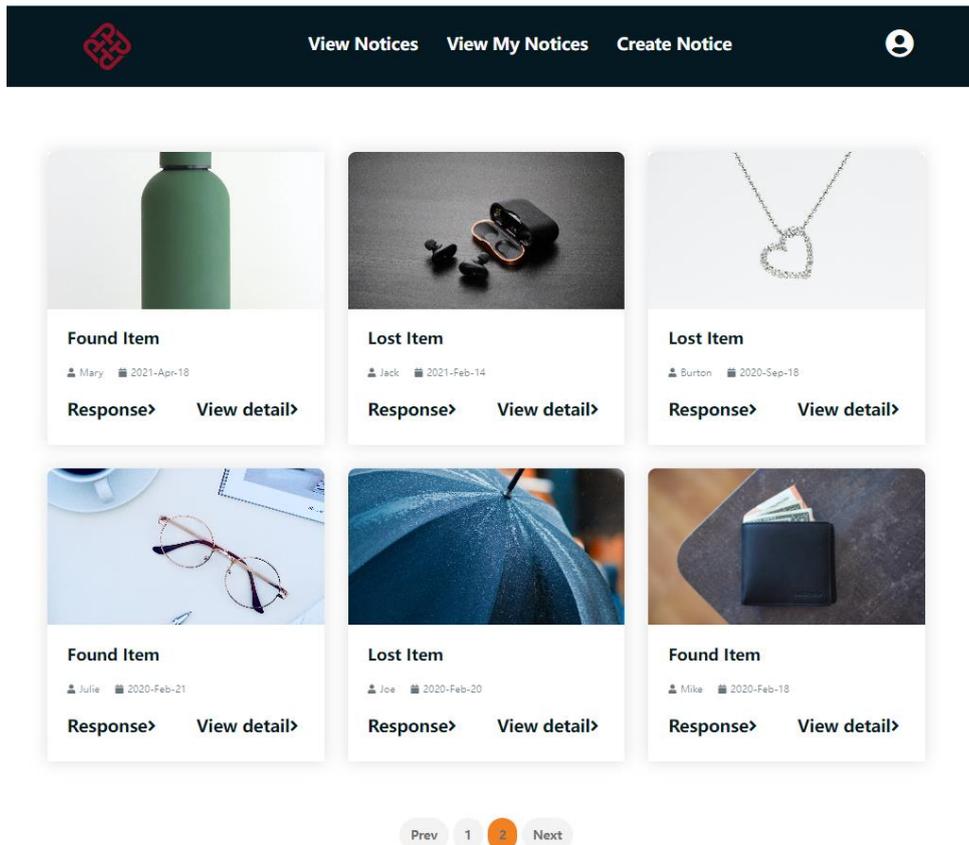
[Edit](#) ! Your birthday is required!

7. User View Notices

Once logging in, the initial page is “View Notices”, which lists all pending notices in descending order of their created date. You can also navigate to this page by clicking the “View Notices” tag on the top. For each notice, only the image, type(lost/found), creator’s nickname and the created date are displayed for overview. The user can respond or view detail by clicking the corresponding tags.

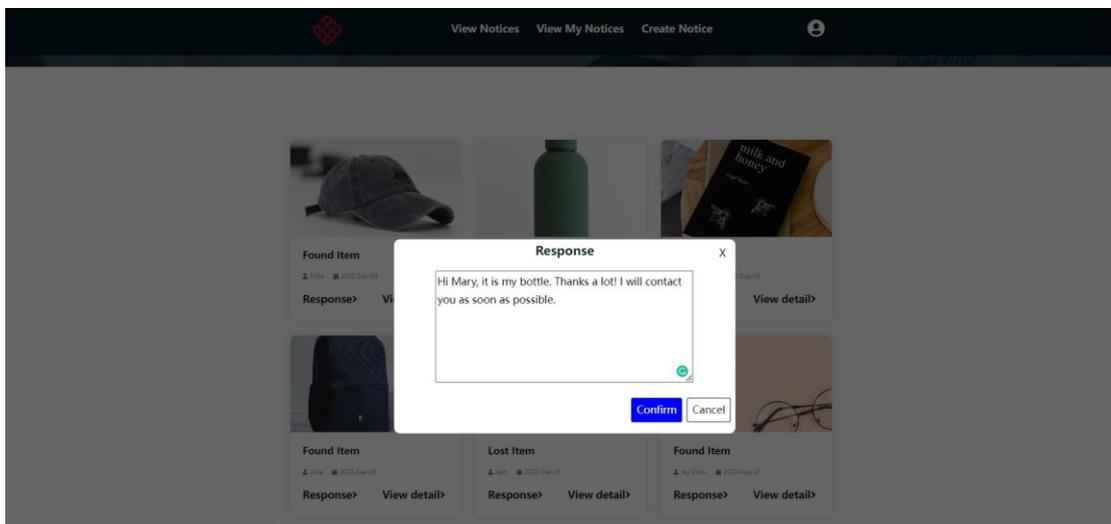


You can use the navigation bar to turn to other pages to see other notices.



8. Response to A Notice

You can respond to a pending notice by clicking the “Response>” tag of that notice on the “View Notices” page. You can see the following dialogue box show up in the centre and the rest of the screen is blocked. Type your response and click “Confirm”.

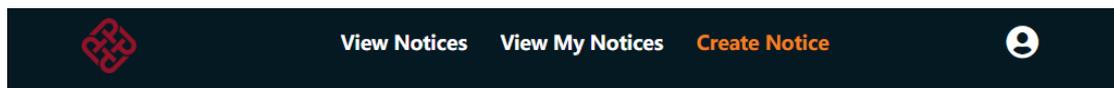


Then you will see the following pop-up window and the responded notice will disappear on the “View Notices” page as it has been completed now.



9. Create A Notice

You can create your notices by clicking the navigation tag “Create Notice” on the top and then you will be led to the following page.



Basic Information

Please fill in the following form to describe your notice! Kindly remind that each field is required!

Lost	▼	年/月/日	🗑️
Venue	Contact		
Please leave a brief description here...			

All fields in the chart are required to create a notice. If the user leaves any of them blank and clicks the “SUBMIT” button, some alert messages will show up.

年/月/日	🗑️	Venue
Contact	! You have to specify the lost/found date!	! You have to specify the venue!
Contact	! You have to provide your contact information!	Upload Item Image: 选择文件 未选择任何文件 ! Please upload an image of the item!

Please leave a brief description here...

Upload Item Image:

 You have to leave a brief description here!

After inputting all fields, you can click the “SUBMIT” button to create a new notice.

Basic Information

Please fill in the following form to describe your notice! Kindly remind that each field is required!

Lost	2022/12/01
------	------------

DE304	67759523
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I forgot to take my pen with me after the lecture. If you find it, please contact me. Thank you very much!

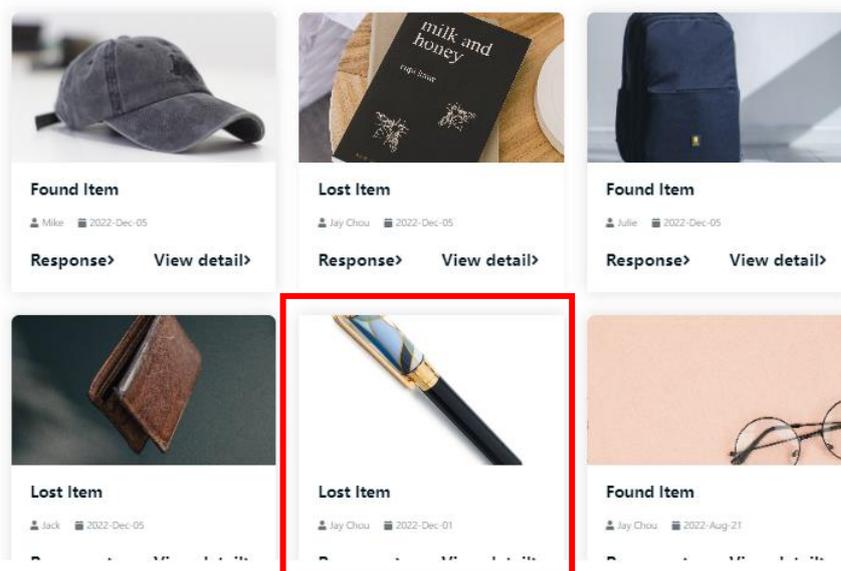
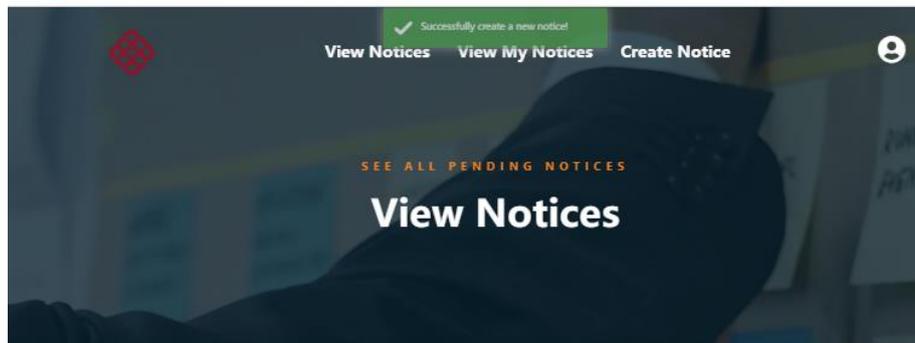
Upload Item Image:

 pen.jpg



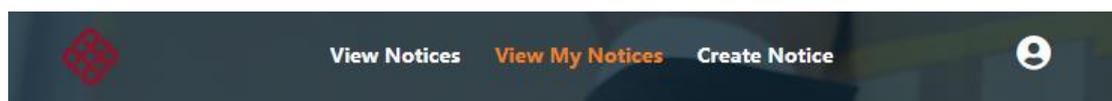
SUBMIT

Then you will jump to the “View Notices” page, and you will see the pop-up message on the top and your newly created notice in the list.



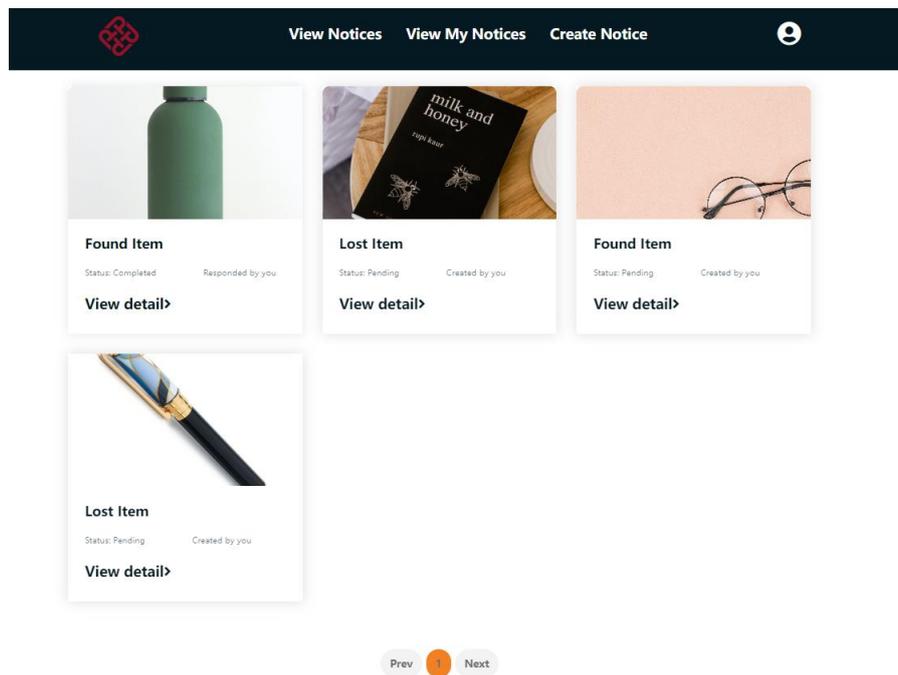
10. View My Notices

You can view all notices created or responded by you by clicking the “View My Notices” on the top.



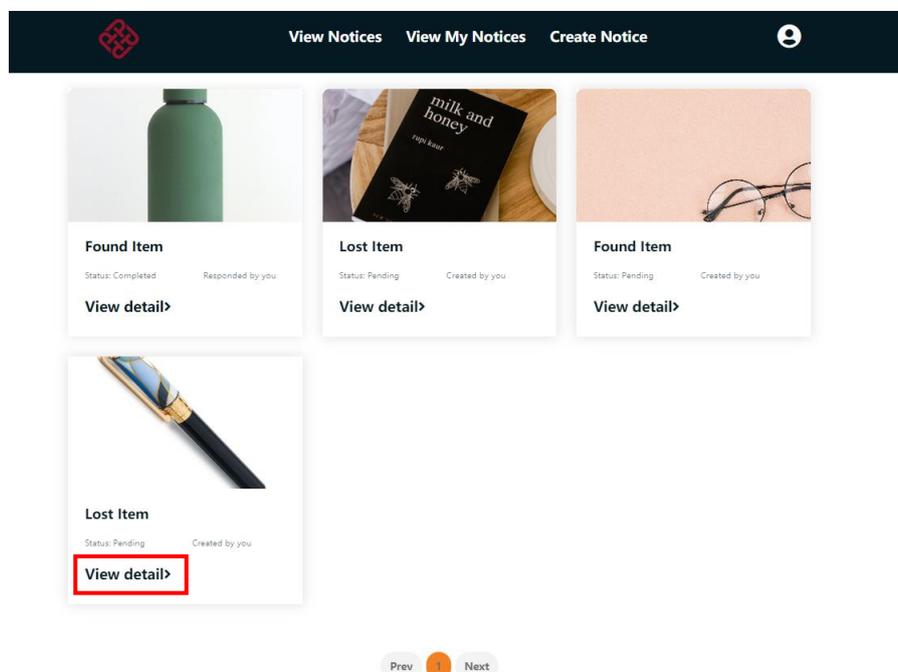
After clicking it, you can see the following page, which only displays the image, type (lost/found), status (pending/completed) and (created/responded by you) for overview. You can click the View detail

tag to see the detailed information of that notice. The navigation bar at the bottom is also available when there are multiple pages of notices.

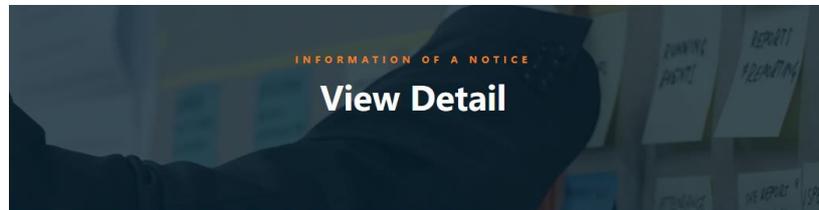


11. View Notice Detail

You can view the detail of a notice by clicking the “View detail>” tag.



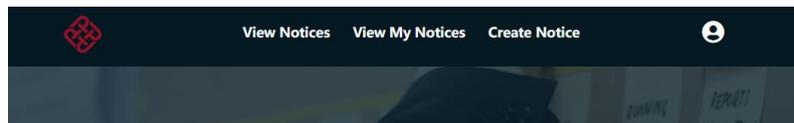
If you view a notice which is still pending, all the information of that notice will be displayed, including the image, type(lost/found), status(pending/completed), the creator's nickname, issued date, venue, contact and description.



Lost Item (status: Pending)

Issued by: JJ Lin
Issued Date: 2022-Dec-01
Venue: DE304
Contact: 67759523
Description: I forgot to take my pen with me after the lecture.
If you find it, please contact me. Thank you very much!

If you view a notice which is completed, except the basic information of that notice, the information of the response will also be included (the responder's nickname, response date and the content of the response).



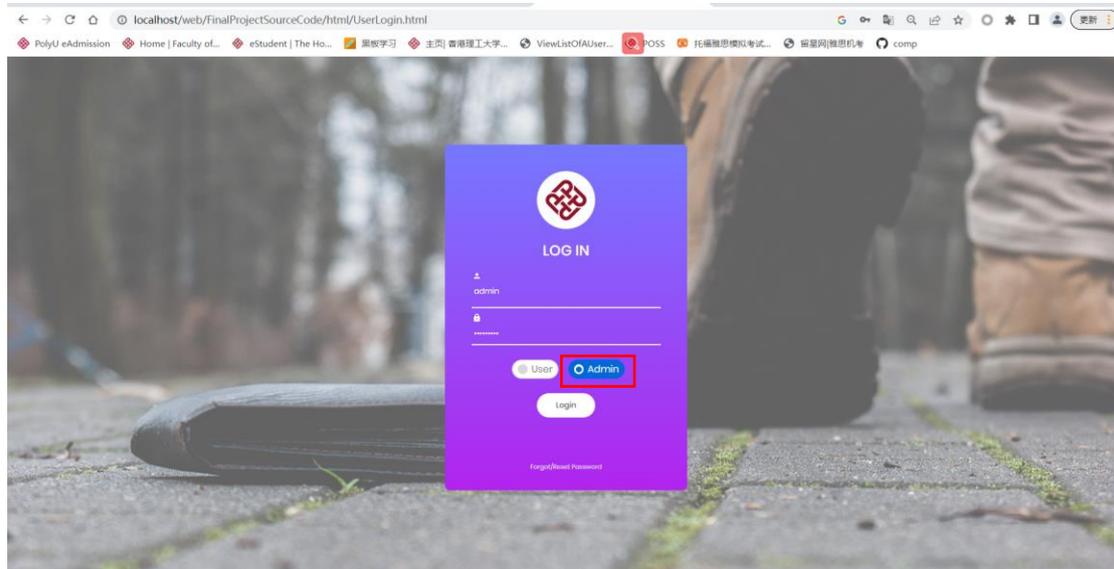
Found Item (status: Completed)

Issued by: Mary
Issued Date: 2022-Dec-05
Venue: VA Canteen
Contact: 77089985
Description: Whose green bottle? I found it when I was eating at the canteen.

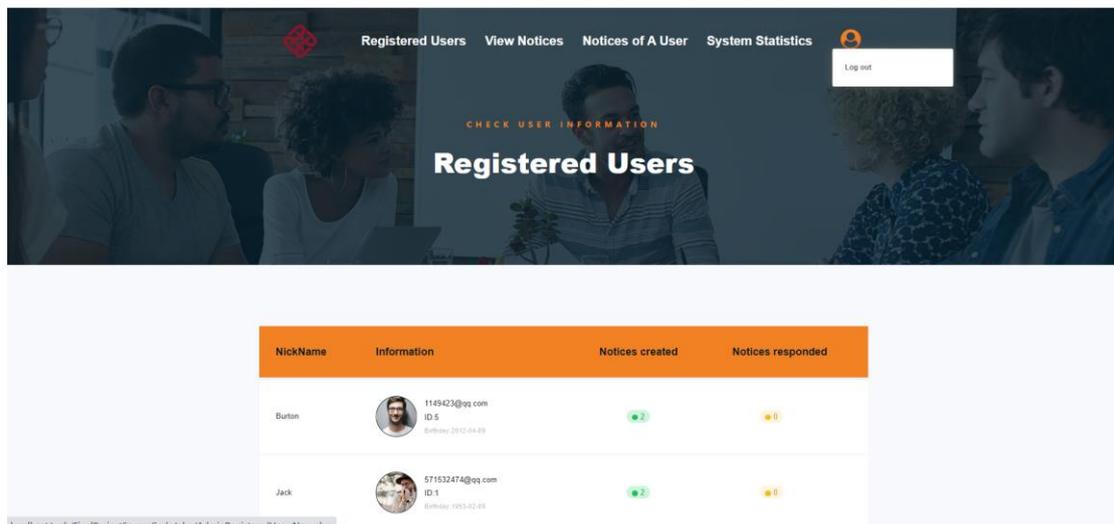
Responded by: JJ Lin
Responded Date: 2022-Dec-05
Response: Hi Mary, it is my bottle. Thanks a lot! I will contact you as soon as possible.

12. Admin Login/Log out

Move back to the Main Page, and use the default id “admin” and password “adminpass” to log in. Don’t forget to switch the option button to “Admin”, otherwise, you are not allowed to log in.

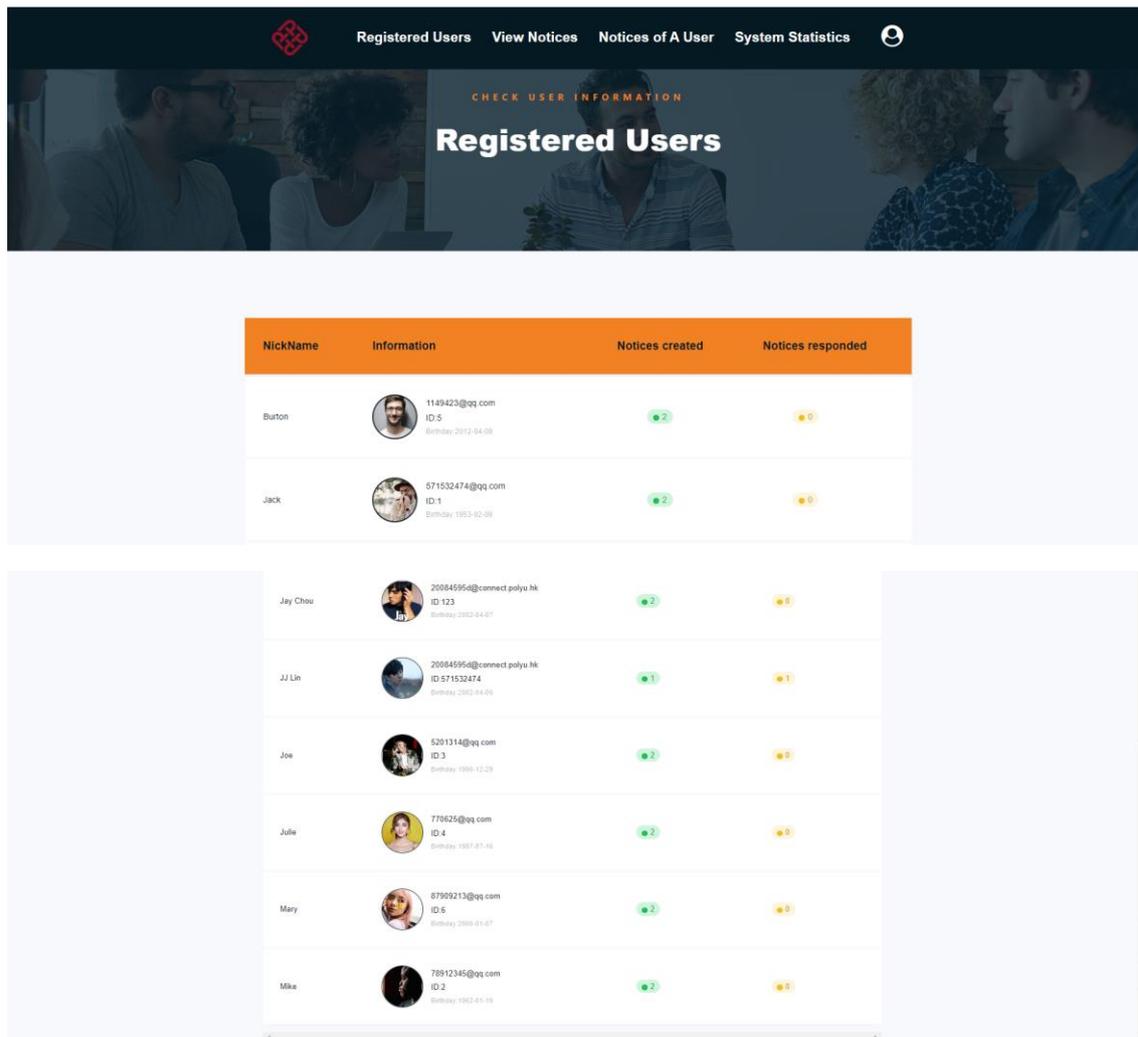


If you see the following admin interface, you successfully log in to the system as an admin. If you want to log out, just hover on the user icon at the top-right corner and click the “Log out” tag. Then you will jump to the main page.



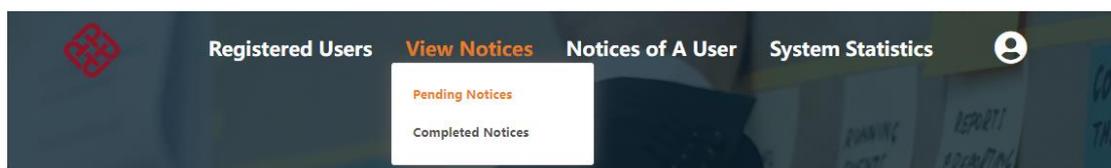
13. View List of Registered Users

After logging in as an admin, the initial page is “Registered Users”, where all users are displayed in ascending order of users’ nicknames. Some other information like image, email, account id, birthday, notices created, and notices responded are also displayed.

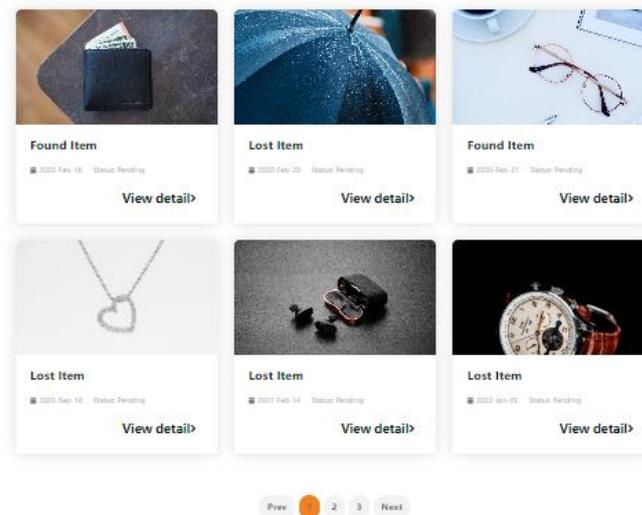


14. View List of Pending/Completed Notices

You can view all pending notices by first hovering on the “View Notices” tag and then clicking the “Pending Notices” tag.



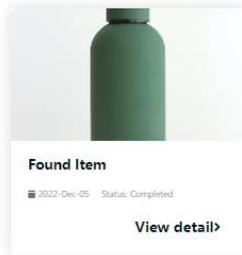
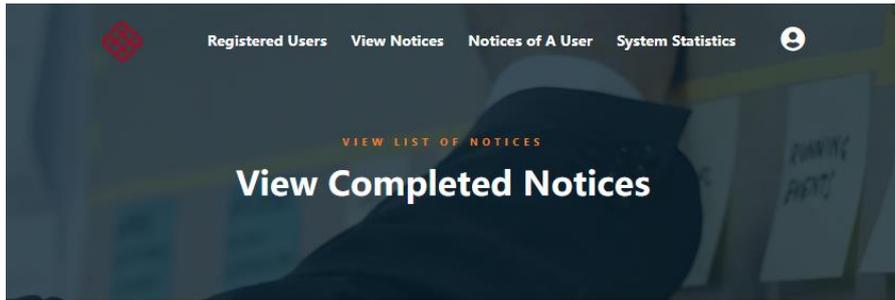
You will go to the following page. The detail of the notice can be viewed by clicking the “View detail>” button. The navigation bar at the bottom is also available.



You can view all completed notices by first hovering on the “View Notices” tag and then clicking the “Completed Notices” tag.



You will go to the following page. The detail of the notice can be viewed by clicking the “View detail>” button. The navigation bar at the bottom is also available.



15. View List Notices of A User

You can view all pending or completed notices created and responded by a specified user by clicking the “Notice of A User” tag.



You can search for the user id in the search bar. If an admin inputs nothing in the search bar and click the search icon, he will receive an alert message.

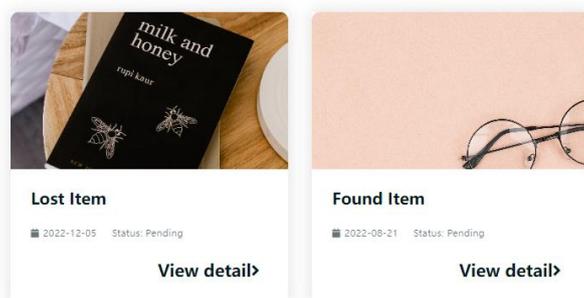
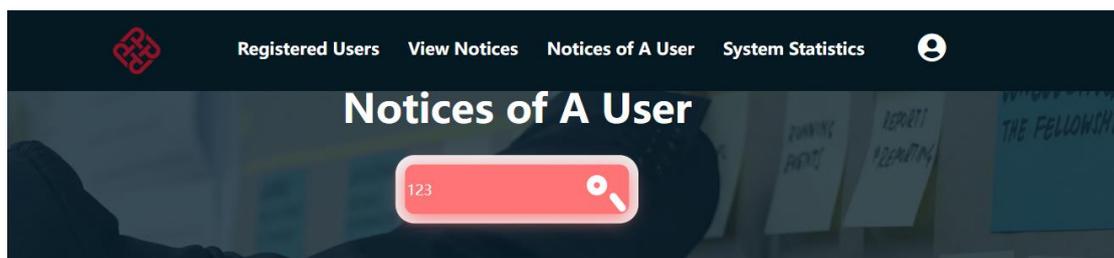


If an admin inputs an invalid user ID or the user doesn't have any notices created, "No results " will be displayed.



No results!

If an admin inputs a valid user ID and that account has created some records, the records will be displayed. You can view the detail by clicking the "View detail>" tag.

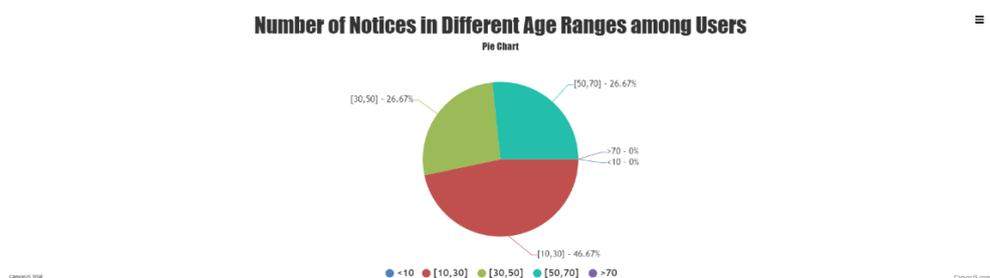
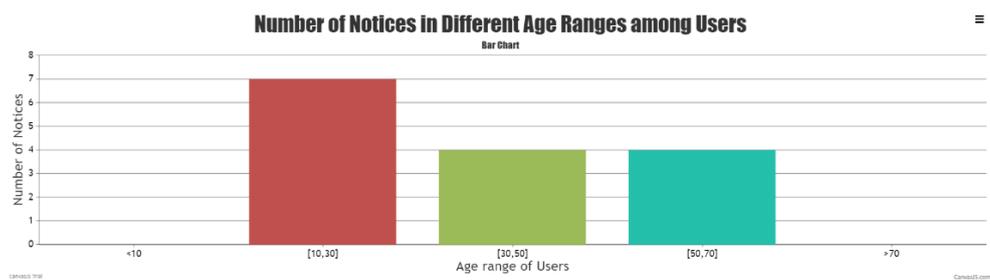
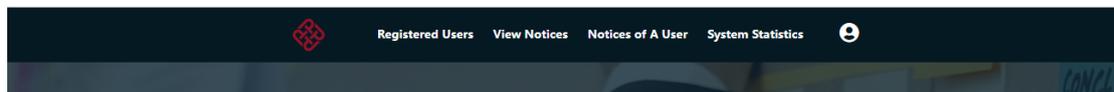


16. System Statistics (Optional)

You can view the system statistics by clicking the “System Statistics” tag on the top.



A bar chart and a pie chart will show the statistics of the number of notices in different age ranges (e.g., <10, [10,30], [30,50], [50,70], >70) among users.



V. Conclusion

In this project, I built a lost and found website with the knowledge of html, css, js, jquery and php learned in the lecture. This was the first time I completed the design and implementation of both the front end and back end of a website, hence, I really felt a sense of accomplishment after finishing it. This project benefits me greatly from two aspects. The first one is that my learning ability has been greatly improved. In order to build a complete web system, it is far from enough to master the knowledge in lectures. For example, we may need to use bootstrap to build a nicer interface, and we may also have to use some library to realize some complex functions like sending emails, etc. In the early stage of the project, I can't understand and apply the new knowledge very efficiently. There were many times that after a whole day's study, I was still struggling with that feature. However, I didn't give up, constantly modifying the sample codes for testing, and actively asking seniors and classmates. Gradually, I felt a remarkable improvement in my understanding ability. I was able to fully implement a new function, like sending email, in almost a morning. The second point is that my ability to modify code has greatly improved. In the beginning, debugging code was a nightmare for me, and there were many times I couldn't figure out why the page crashed. However, after a few days, I gradually mastered the use of the browser page inspection tool and truly realized its power. I learnt how to directly adjust the CSS and HTML code to optimize the interface display. I also learnt how to use the "network" panel to check the parameters in cookies and URLs, which greatly improves my work efficiency. This project not only enabled me to master a lot of professional knowledge but also greatly stimulated my interest in making web pages. I regard it as a valuable practical experience.